

LOW-IMPACT METHOD AND APPARATUS FOR MAINTAINING NETWORK ACCESS SERVERS

ABSTRACT

Sub 5
A17 The disclosed method and apparatus are for performing maintenance on a network access server having associated channels, the network access server being operatively coupled with a service request router, e.g. a telephone company (telco) switch. The method includes first determining whether off-line maintenance is needed on a network access server and if so then communicating a busy condition of any associated channel from the network access server to the telco switch. The method further includes monitoring any used associated channel until the used associated channel becomes unused. Thereafter, maintenance may be performed on the network access server. After completion of the maintenance, the method includes communicating an idle condition of any associated channel to the telco switch. For the duration of the maintenance on the given access server, new client service requests that may arrive during a busy condition of the network access server are auto-routed to another network access server operatively coupled with the telco switch.

The apparatus includes a maintenance scheduler for scheduling off-line maintenance for a given network access server. It further includes a channel usage monitor responsive to the scheduler for monitoring usage of the associated channels of the given network access server. Finally, a make-busy mechanism is provided that is responsive to the channel usage monitor and coupled with the telco switch. The make-busy mechanism signals the telco switch that all channels are busy, whereby maintenance is performed on the given network access server after the signaling and upon a determination by said channel usage monitor that no channel is currently in use. There is thus no discernible impact of maintenance on current or future users/clients, and maintenance may be scheduled even during peak use hours of operation of the network.